

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-11. (Canceled):

12. (Currently Amended): In an optical path comprising a plurality of optical transmission devices for transmission of a transmission signal therealong, each device receiving said transmission signal and transmitting said transmission signal, said transmission signal comprising an overhead portion and a payload portion, a method for monitoring said optical transmission path comprising:

identifying a first set of said optical transmission devices associated with a first monitoring zone, said first set of optical transmission devices including first and second optical transmission devices designated as first and second end-point devices, the remaining optical transmission devices in said first set being designated as first relay devices;

identifying a second set of said optical transmission devices associated with a second monitoring zone, said second set of optical transmission devices including third and fourth optical transmission devices designated as third and fourth end-point devices, the remaining optical transmission devices in said second set being designated as second relay devices;

transmitting first insertion-type instruction signal to said first end-point ~~devices~~ device, said first insertion-type signal informs said first end-point device of a first monitoring information signal for monitoring said first monitoring zone and a first overhead portion for storing said first monitoring information signal and instructs insertion of said first monitoring information signal in said first overhead portion of a received transmission signal, said first end-point device thereby modifying said transmission signal by inserting said first monitoring information signal into said first overhead portion of said transmission signal and transmitting said transmission signal as modified;

transmitting second insertion-type instruction signal to said third end-point devicees device, said second insertion-type signal informs said third end-point device of a second monitoring information signal for monitoring said second monitoring zone and a second overhead portion for storing said second monitoring information signal and instructs insertion of said second monitoring information signal in said second overhead portion of a received transmission signal, said third end-point device thereby modifying said transmission signal by inserting said second monitoring information signal into said second overhead portion of said transmission signal and transmitting said transmission signal as modified;

transmitting passthrough-type instruction signals to said first relay devices and to said second relay devices, said passthrough-type instruction signals inform said first or second monitoring information signal and said first or second overhead portion; and

transmitting end-point processing type instruction signals to said second and fourth end-point devices, said end-point type instruction signals inform said first or second monitoring information signal and said first or second overhead portion.

13. (Original): The method of claim 12 further including receiving user-provided information representative of said first and second monitoring zones, wherein said optical transmission devices comprising said first and second sets are dependent on said user-provided information.

14. (Currently Amended): The method of claim 12 wherein if said first and second monitoring zones overlap such that some of said optical transmission devices belong both to said first set of optical transmission devices and to said second set of optical transmission devices, then said first and second overhead portion portions of said transmission signal are different portion.

15. (Currently Amended): The method of claim 12 wherein if said first and second monitoring zones do not overlap, then said first and second overhead portion portions of said transmission signal are the same portion.

16. (Original): The method of claim 12 further including for each of said first relay devices and each of said second relay devices, in response to receiving said passthrough-type instruction signals, transmitting a received transmission signal which includes monitoring information signals in a manner that does not modify said monitoring information signals.

17. (Original): The method of claim 12 further including for each of said second and fourth end-point devices, in response to receiving said end-point processing type instruction signal, performing end-point processing based on monitoring information signals contained in a received transmission signal.

18. (Original): The method of claim 12 wherein a first portion of each of said first and second insertion-type instruction signals is representative of optical transmission path monitoring parameters, said first monitoring information signals being based on said first portion of said first insertion-type instruction signal, said second monitoring information signals being based on said first portion of said second insertion-type instruction signal.

19. (Original): The method of claim 12 further including transmitting said insertion-type, said passthrough-type, and said end-point type instruction signals from a first location.

20. (Original): The method of claim 19 wherein said end-point processing includes transmitting monitor processing result signals to said first location.

21-37. (Canceled)

38. (Previously presented): The method of claim 12 wherein said overhead portion is a part of an overhead of SDH or SONET and wherein said overhead portion is unused.